

OKEANOS EXPLORER

Electronics Equipment

Dynamic Positioning System

Kongsberg K-POS DP-11:

DP system is utilized for shiphandling, mapping surveys, and over-the-side operations such as precision CTD casts and ROV dives.

<http://www.km.kongsberg.com/>

Navigation DGPS

Furuno GP-150:

Differential-corrected GPS provided for navigation

<http://www.furuno.com/>

High Accuracy GPS Receiver

C-NAV 2050:

RTG Corrected Precision GPS for Ship Navigation (DP system), multibeam (POS/MV) and SCS.

<http://www.cctechol.com/>

Mission DGPS

Furuno GP-150:

DGPS provided to Mission equipment and logged in SCS.

<http://www.furuno.com/>

Location, Heading & Attitude Sensing System

Applanix POS/MV 320 v4:

Position and Orientation System for Marine Vessels. Used to provide motion data to DP and Multibeam.

<http://applanix.com/>

Gyrocompass System

Meridian Standard Gyrocompass:

2 Gyros provide ship direction information and data from one of the Gyros is recorded in SCS.

<http://www.vttss.com/>

Electronic Charting & Display Info System (ECDIS)

Transas Navi-Sailor 3000:

<http://www.transas.com/>

Navigation Windbird

RM Young Model 05106:

Wind speed and direction are provided to SCS for data logging.

<http://www.youngusa.com>

Meteorological Station

ZENO-3200 Programmable logger:

Translates Met data to send to SCS for logging.

Vaisala HMP45A:

Air temp/Relative humidity sensor with radiation shield

RM Young 05103:

Wind speed and direction sensing unit and interface

RM Young 61202V:

Barometric sensing and Gill pressure port

EPPLY PSP and PIR:

Radiometers, Long and short wave. Precision Spectral Pyrometer (PSP) measures solar spectral region (shortwave). Precision Infrared Radiometer (PIR) measures terrestrial spectral region (longwave)

<http://www.youngusa.com/>

Navigational Depth Sounder

ODEC IES-10:

The ODEC IES-10 Echosounder provides water depth information for navigational purposes.

<http://www.oceandata.com/>

Doppler Speed Log

Sperry SRD-500:

Provides forward/aft and port/starboard ship speed measurements. Data from the SRD-500 is recorded in SCS.

<http://www.sperrymarine.northropgrumman.com/>

Multi-Beam Sonar

Kongsberg EM-302 Multibeam:

Hull mounted transducer array with transceiver, acquisition computer, hardware, software, helmsman display and computer and display in mission control room.

<http://www.km.kongsberg.com/>

Single Beam Echo Sounder

Kongsberg EA600:

Kongsberg EA600 Single Beam Echosounder is a 12-kHz system commonly used during CTD operations.

<http://www.km.kongsberg.com/>

Sub Bottom Profiler

Knudsen 3260 Chirp:

Sub-bottom profiler provides information about the upper layers of the seafloor. This data can be combined with bathymetry from the multibeam.

<http://www.knudsenengineering.com/>

Master Time Clock

Symmeticom Tymserve 2100-GPS Network Time Server:

Provides time code translator generator with RS 232 REQ option, IRIG B, and on request computer data output capability. The master clock shall be capable of serving network time to NTP or SNTP clients over the network.

<http://www.symmttm.com/>

Shipboard Computer System

NOAA SCS:

The Scientific Computer System (SCS) is a high-powered computer system that collects, processes, displays and archives data from the navigational and scientific sensors onboard the OKEANOS EXPLORER, ROV and Multibeam system.

<http://oceanexplorer.noaa.gov/technology/tools/scs/scs.html>

Scientific Seawater System

Seabird SBE-38 and SBE-45:

SeaBird SBE-38 remote temp sensor is located in the bowthruster room at the system's intake, whereas the SBE-45 Thermosalinograph (MicroTSG) is located in the wet lab. The temperature from the SBE-38 and salinity from the SBE-45 is sent to the multibeam for continuous sound velocity monitoring. The temperature and sound velocity from the 38 as well as temperature, salinity and conductivity from the 45 are all sent to SCS for logging. The Turner designs 10-AU-005 or Turner designs 10-AU-005 fluorometer also logs to SCS.

<http://www.seabird.com/>

<http://www.turnerdesigns.com/>

Water Column Profiling

Seabird SBE-9/11 plus:

SBE-9plus underwater CTD with dual temp and conductivity sensors and an SBE-11 plus deck unit. This system has four ports available for up to 8 auxiliary sensors.

<http://www.seabird.com/>

Expendable Bathythermograph

Sippican MK-21/USB:

Expendable bathythermograph data acquisition system. This system is utilized to collect sound velocity profiles for multibeam data acquisition.

<http://www.sippican.com/>